



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,872	09/05/2003	David K. Platner	60,130-1720/03MRA0168	8096

26096 7590 04/06/2004

CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER

WILLIAMS, THOMAS J

ART UNIT	PAPER NUMBER
----------	--------------

3683

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,872

Applicant(s)

PLATNER ET AL.

Examiner

Thomas J. Williams

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-19 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 14 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/05/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

1. Acknowledgment is made in the receipt of the oath filed January 26, 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,886,254 to Carpentier et al.

Re-claims 1-6, Carpentier et al. discloses a composite leaf spring comprising: a forward leaf spring segment comprising an arcuate member; a rearward leaf spring segment; a mounting segment intermediate the forward and rearward spring segments; the mounting segment (interpreted as the area adjacent the eye) comprises a tapering width and an expanding depth providing a singular cross section, the mounting segment defines a substantially equivalent cross sectional area; the leaf spring is non-linear; the arcuate member defines a hook.

Re-claims 8- 11, Carpentier et al. discloses a suspension system comprising: a composite leaf spring comprising a forward leaf spring segment comprising an arcuate member; a rearward leaf spring segment; a mounting segment intermediate the forward and rearward spring segments; a forward attachment system comprising a retaining pin transverse (the examiner takes official notice that the use of retaining pins and threaded bolts for securing a leaf spring to a

Art Unit: 3683

vehicle body is well known in the art, furthermore the eyelet is clearly designed to receive either bolt or pin).

4. Claims 8-12, 15-18, and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,468,014 to Strong.

Re-claims 8-12 and 15-18, Strong discloses a suspension system comprising: a composite leaf spring with forward, rearward and mounting segments, the forward segment is provided with an arcuate segment; a retaining pin will rest within busing 56, the examiner takes official notice that the use of retaining pins and threaded bolts for securing leaf springs to a vehicle body is well known in the art; a resilient tube 66 surrounds the pin; the pin will engage and inner arc of the arcuate segment; the resilient member is molded in the inner arc of the arcuate segment (see column 6 lines 5-25); a bracket is used to support the spring (see column 4 lines 16-19, furthermore C shaped brackets are one common mounting means anticipated by Strong).

Re-claims 21-23, Strong discloses a method of mounting a composite leaf spring, comprising the steps of: forming an arcuate segment as an end of a composite spring; trapping the arcuate segment between a first retainer (such as a pin) and a second retainer (such as a bracket); overmolding a resilient member material to an inner arc of the arcuate segment; and fastening the first retainer through the resilient member. A thermoplastic is considered a resilient material.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

6. Claims 1, 5-11, 16-18, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,580,347 to McGee.

Re-claims 1 and 5-7, McGee discloses a composite leaf spring (column 4 lines 25-28) comprising: a forward leaf spring segment 37 comprising an arcuate member extending therefrom; a rearward leaf spring segment 40; a mounting segment 24; the arcuate segment defines a hook; the forward leaf spring segment is thicker in depth than the rearward leaf spring segment, see figures.

Re-claims 8-11 and 16-18, McGee discloses a suspension system comprising: a composite leaf spring comprising forward leaf spring segment 37 defining an arcuate segment, a rearward segment 38 or 40, an intermediate mounting segment 24; a forward attachment system comprising a retaining pin, the pin has a shank surrounded by a resilient member 102, the pin is a threaded bolt, the pin engages an inner arc of the arcuate segment, the pin is retained by a C-shaped bracket.

Re-claims 21 and 22, McGee discloses a method of mounting a composite leaf spring to a forward attachment system mounted to a vehicle, comprising the step of: forming an arcuate segment as an end of a composite leaf spring; trapping the arcuate segment between a first retainer 104 and a second retainer 94.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

Art Unit: 3683

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 8, 9, 11-13, 16, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,061,364 to Parks in view of Strong.

Re-claims 8, 9, 11-13, 16, 17 and 19, Stuart teaches suspension system comprising: a leaf spring comprising a forward leaf spring segment defining an arcuate segment, a rearward segment, and a mounting segment; a forward attachment system comprises a retaining pin 60 surrounded by a resilient tube 48; the pin engages an inner arc of the arcuate segment; a bumper 48 engages an outer arc of the arcuate segment; the bumper has an arcuate surface engaging the outer arc of the arcuate segment; a C-shaped bracket 34 retains the leaf spring.

However, Parks fails to teach the leaf spring as being manufactured from a composite material. Strong teaches a leaf spring manufactured from a composite material, thus reducing weight over conventional steel leaf springs, see column 2 lines 3-13. It would have been obvious to one of ordinary skill in the art to have manufactured the leaf spring of Parks from a composite as taught by Strong, thus reducing the overall weight of the suspension system.

Allowable Subject Matter

10. Claims 14 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3683

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. De Goncourt and Robertson each teach a composite spring with varying widths and depths. De Goncourt teaches a composite spring with molded attachment means. Stuart teaches leaf spring having bumper elements. Greco teaches a composite leaf spring supported by bolts and C-shaped brackets.

Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached at (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

March 31, 2004

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams

AO 3683

3-31-04